

ADDITIONAL MATERIALS TOWARD A MONOGRAPH OF THE GENUS
CALLICARPA. XXII

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CALLICARPA TOMENTOSA (L.) Murr.

Additional bibliography: Moldenke, *Phytologia* 22: 196, 199, & 207--209. 1971.

Bakhuizen van den Brink (1921) included in the synonymy of this taxon, in addition to the names listed at the close of the previous installment of these notes, also the following: C. maingayi King & Gamble [which I regard as a valid and distinct species], C. tectonaeiflora Wall. [a synonym of C. arborea Roxb.], C. vastifolia Diels [a synonym of Viburnum rhytidophyllum Hemsl.], C. vestita Wall. [a valid species], C. villosa Roxb. [a synonym of C. arborea], and C. villosa Vahl [a name of uncertain standing]. Lam (1924) also regards C. magna Schau. as a synonym of C. tomentosa.

Hasskarl (1867) regarded Tondi-teregam as questionably Callicarpa candicans (Burm. f.) Hochr. or C. macrophylla Vahl. Heyne (1927) and Deb, Sengupta, & Malick (1968) reduce C. arborea Roxb. to the synonymy of C. tomentosa. Clarke (1885) lists C. farinosa Roxb. as a synonym of what he calls C. arborea Roxb. It is based on Herb. Wallich 1826 G from Madras.

In some previous publications I regarded C. lanata var. psilocalyx H. J. Lam as typical C. tomentosa, but I now regard it as C. arborea var. psilocalyx (H. J. Lam) Moldenke.

It should be pointed out here that the Callicarpa arborea accredited to Merrill in the synonymy of C. tomentosa is actually a synonym of C. arborea var. psilocalyx (H. J. Lam) Moldenke, that credited to Roxburgh is a valid species, and that credited to Wallich is C. vestita Wall.; the C. cana credited to Gamble is a synonym of C. macrophylla Vahl, that ascribed to Linnaeus, to Sprengel, and to Vahl is C. candicans (Burm. f.) Hochr., while that credited to Wallich is in part C. longifolia Lam. and in part C. pedunculata R. Br.; the C. farinosa of Siebold & Zuccarini is C. mollis Sieb. & Zucc.; the C. integrifolia of Champion and of Forbes & Hemsley is C. integerrima Champ., while that of Jacquin is Aegiphila integrifolia (Jacq.) Jacks.; the C. lanata accredited to Hosséus is a synonym of C. arborea Roxb., that of Gamble is C. vestita Wall., that of H. J. Lam is C. arborea var. psilocalyx (H. J. Lam) Moldenke, that of Lamarck is Premna tomentosa Willd., that accredited to Ridley is C. maingayi King & Gamble, and that ascribed to Schauer, to Vahl, to Walpers, and to Zippelius is C. pedunculata R. Br. Finally, the C. tomentosa ascribed to "Auct.", to Hooker & Arnott, to Willdenow, to "sensu auct. japon.", to "sensu Matsum.", to "sensu Matsum. & Hayata", and to "Koen. ex Vahl" is C. kochiana Mak., that credited to

Bakhuizen van den Brink is in part C. arborea Roxb and in part C. integerrima Champ., that credited to Lam & Bakhuizen van den Brink is C. arborea Roxb., that of König and of Vahl is C. macrophylla Vahl, that of Lamarck and of "L. ex Sprengel" is C. candicans (Burm. f.) Hochr., that of Thunberg is C. longifolia Lam., and that credited to "L. ex Moldenke" is C. erioclona Schau. The Cornutia corymbosa Burm. f. is a synonym of what we now call Premna obtusifolia R. Br.

It is perhaps also worth mentioning here that the Willdenow (1809) reference in the bibliography of C. tomentosa is sometimes erroneously cited as "1808"; similarly, the illustration in R. Wight's work (1850) is sometimes incorrectly cited as "t. 1736". Lam (1924) cites "L., Mant. II. (1767). 331", Raizada (1966) writes it "Linn. Mant. 2: 331, 1771", Retzius (1789) cites it as "p. 333", and other authors have said "L., Mant. 2: 33. 1767" -- all apparently incorrect. The Itô (1928) reference is sometimes cited as "1927" for some reason not known to me. The Dassow (1747) work is often cited as "L., Nov. Pl. Gen. 5". Curiously, the surname of this author, Carl Magnus Dassow, is written "Dassaw" in the 1747 work and "Dassow" in the 1749 reprint.

Kadambi (1950) reports that C. tomentosa grows "in sunlight with Leea aspera and species of Strobilanthes on tableland adjoining the exposed western wall" in southern tropical wet evergreen forests of the western Ghats in Mysore, India. Puri (1960) reports it from the second layer, which may be 10--25 feet tall, in tropical forests of northern Kanara on siliceous rocks, in the second story on outskirts or in clearings along with the dominant Carvia callosa in montane subtropical forests of Bhimashankar, and in the evergreen top story to 35 feet tall with dense canopy and little undergrowth in the shade. He avers that it constitutes a food plant for Orgyia postica. Balakrishnan (1964) records C. tomentosa from Madras, India.

Lam (1919) cites for his C. lanata var. typica the following specimens: MALAYA: Malacca: W. Griffith 6037, Herb. Wight 2314, Maingay 1192. PHILIPPINE ISLANDS: Luzon: Elmer 9125 (Le--908.-1146-1998). GREATER SUNDA ISLANDS: Celebes: Teijsmann & DeVriese s.n. (Le--908.265-360, Le--908.266-802). Java: Herb. Rijksherb. Leid. 908.265-933. Sumatra: Junghuhn s.n. (Le--908.265-948, Le--908.266-804); Korthals s.n. (Le--908.266-823, Le--908.266-830). LESSER SUNDA ISLANDS: Timor: Decaisne s.n. (Le--908.265-11435).

Beer & Lam (1936) cite Brass 3675 & 5495 from New Guinea. Sunramanian (1966) cites Vallappatti 761 from Coimbatore, India; Panigrahi & Joseph (1966) cite their no. 14877 from Nefa; Sebastine & Ramamurthy (1966) cite their no. 16065 from Kerala, Vajravelu and his associates (1968) cite Vajravelu 19108 and Ellis, Swaminathan & Chandrabose (1967) cite 18537 & 20446 from the same state; Kammathy, Rao, & Rao (1967) cite their nos. 73830, 79933,

& 80317 and Barnes s.n. from Mysore; while Deb, Sengupta, & Malick (1968) cite Sengupta 1026a, 1187, & 1128 from Bhutan.

The Lörzing 5857 collection, cited below, is sterile — one sheet has entire-margined leaves, the other has them dentate. The plant may not be verbenaceous. Bal 15 and Lörzing 7469 are also sterile, with dentate leaf-blades.

Material of C. tomentosa (L.) Murr. has been misidentified and distributed in herbaria under the names C. arborea Roxb., C. longiloba Merr., C. macrophylla Vahl, C. macrophylla Wall., and C. tomentosa Willd. On the other hand, the Teijsmann 3525 H.B. and Yates 629, distributed as C. tomentosa, are actually C. arborea Roxb., Collector undesignated 15 is C. cubensis Urb., Hayata, Kanehira, & Tanaka 283 and E. H. Wilson 10850 are C. formosana Rolfe, Kato 284 is C. kochiana Mak., C. B. Clarke 12628 D and Kurz s.n. [Sikkim] are C. vestita Wall., and Carr 14870 & 15376 are Geunsia cumingiana (Schau.) Rolfe.

In all, 49 herbarium specimens and 4 mounted photographs of C. tomentosa have been examined by me.

Additional citations: INDIA: Bombay: E. W. Erlanson 5220 (N); J. Fernandes 114 (A); Herb. Blatter 23495 (Xa); Herb. Coll. Pharmacy s.n. [Khandolla, Nov. '91] (Pa); Santapau 1554 (N). Cochin: Meebold 12483 (S). Coimbatore: Narayana s.n. [Siruvani] (N). Kerala: Jeshoda 346 (N); Stocks, Law, &c. s.n. [Malabar, Concan] (N, S, W--2496334). Madras: Koelz 11163 (Mi); Kuntze 7591 (N, N); G. Thomson s.n. [Mont. Nilghiri & Kurg] (S). Travancore: E. W. Erlanson 5457 (N); E. K. Janaki 962 (Mi). State undetermined: Herb. T. Cooke s.n. (Mi); Herb. Mus. Bot. Stockh. 4 (S); Simons 5699 [Gowhatey] (W--261238); R. Wight 2314 (S), s.n. [Penins. Ind. Orientalis] (N). CEYLON: J. H. Fraser 122 (Du--166512, W--9975); Macrae 20 (T); J. M. de Silva 199 (N). CHINA: Chekiang: R. C. Ching 2425 (Ca--926437). THAILAND: Herb. Roy. Forest Dept. 22215 (Z); Prachantasen 25 (W--2064784); Rock 983 (W--1171537). GREATER SUNDA ISLANDS: Java: Teijsmann s.n. [1868] (Mi). Sumatra: Bal 15 (Bz--18631, Bz--18632); H. O. Forbes 1530 (Ca--529749); Lörzing 5857 (Bz--18646, Bz--18647), 7469 (Bz--18636), 13067 (Bz); Teijsmann s.n. (Bz--18698). NEW GUINEA: Papua: Brass 28841 (W--2409515); C. E. Carr 14870 (N), 15376 (N); M. S. Clemens 11195 (Ca--180886); Herre 219 (Du--188833). NEW GUINEAN ISLANDS: Misima: Brass 27693 (W--2408787). Woodlark: Brass 28719 (W--2409459). CULTIVATED: Java: Herb. Lugd.-Bat. 5745 (N--photo, N--photo, N--photo, Z--photo).

CALLICARPA TONKINENSIS Dop, Bull. Soc. Hist. Nat. Toulouse 64: 508--509. 1932.

Bibliography: P. Dop, Bull. Soc. Hist. Nat. Toulouse 64: 501,

508--509, & 512. 1932; P. Dop, Trav. Lab. For. Toulouse 1 (Art. Divers.), 21: 17. 1932; A. W. Hill, Ind. Kew. Suppl. 9: 46. 1938; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 59 & 87 (1942) and ed. 2, 136 & 178. 1949; H.-T. Chang, Act. Phytotax. Sin. 1: 288. 1951; Anon., U. S. Dept. Agr. Bot. Subj. Index 15: 14354. 1958; Moldenke, Résumé 175 & 445. 1959; Moldenke, Phytologia 20: 496 (1971) and 21: 376. 1971.

Dop's original (1932) description of this taxon is: "Frutex 2 m. altus. Ramuli quadrangulares, graciles, puberuli mox glabri. Folia membranacea, elliptica vel paullo obovata, subacuta et non decurrentia basi, acuta vel rotundata et breviter acuminata apice, tenuissime denticulata in parte superiore, supra puberula in juventute sed glabra adulta et nigra in sicco, subtus tomento subalbido, coarctato, brevissimo pilorum stellatorum aoptimorum, obstructa, 10--14 cm. longa x 4--5 cm. lata; nervus subtus prominens; costae 20--24, tenues, utrinque conspicuae, ascendentes et ad margines recurvatae; venae numerosae, regulares, paralleles; reticulationes inconspicuae; petiolum 15--20 mm. longum. Inflorescentiae: cymae laxae, pubescentes pilis stellatis, 3--4 cm. longae et latae; pedunculi 15--18 mm. longi; flores albidii 3 mm. longi, in glomerulis multifloris densis dispositi; pedicelli subnulli. -- Calyx puberulus, 1 mm. longus, dentibus 4, triangularibus, 0.3 mm. longis. Corolla glabra sed extus valde glandulosa, 2,5 mm. longa; lobus conicus; lobi 4, rotundati, 0,8 mm. longi. Stamina exserta; filamenta corollae basi inserta; antherae paullo glandulosae. Ovarium villosum; stylus stamina superans; stigma capitatum. -- Fructus: drupa pubescens, nigra, 1,5 mm. lata."

The species is based on two collections, Bon 2864 and 2969, from "Lat son, dans les fôrets, Vo xa, Mont chua hac", Tonkin, Indochina. Dop comments that "Cette espèce est voisine du C. longifolia Lamarck. Elle s'en distingue par la forme des feuilles, de tomentum blanchâtre de la face inférieure, la corolle toujours glabre, les étamines moins longuement exsertes, les fruits plus petits."

Chang (1951) regards this species as a synonym of C. bodinieri Léveillé. I know nothing of it save what is stated in the cited literature.

CALLICARPA TOSAENSIS Mak., Bot. Mag. Tokyo 6: [181]. 1892.

Synonymy: Callicarpa tosaensis Mak. apud C. K. Schneid., Illustr. Handb. Laubholz. 2: 593. 1911.

Bibliography: Mak., Bot. Mag. Tokyo 6: [181]. 1892; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 73. 1901; C. K. Schneid., Illustr. Handb. Laubholz. 2: 593. 1911; J. Matsum., Ind. Pl. Jap. 2 (2): 530. 1912; Yanagita, Shinrin Djumoku bo Chibyô Dsusetu [Illustr. Seedlings Forest Trees] 3: fig. 287. 1927; Nakai in Nakai & Koidz., Trees & Shrubs Indig. Jap., ed. 2, 1: 460. 1927; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 73. 1941; Worsdell, Ind. Lond. Suppl. 1: 160. 1941; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 58 & 87. 1942; Hara, Enum. Sperm. Jap. 1: 186. 1948; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 134 & 178. 1949;

Durand & Jacks., Ind. Kew. Suppl. 1, pr. 3, 73. 1959; Moldenke, Résumé 172 & 445. 1959; Moldenke, Résumé Suppl. 15: 17. 1967.

Illustrations: Yanagita, Shinrin Djumoku no Chibyô Dsusetu [Illustr. Seedlings Forest Trees] 3: fig. 287. 1927.

A common name recorded for this species is "ohba-murasaki". It is apparently endemic to Shikoku Island, Japan, the type being from Tosa on that island. Schneider (1911) says "Die *C. tosaensis* Mak.....kenne ich gar nicht". It is also completely unknown to me except for the information given in the cited literature.

CALLICARPA TSIANGII Moldenke, Phytologia 3: 109--110. 1949.

Bibliography: Moldenke, Phytologia 3: 109--110 & 139. 1949; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 131 & 178. 1949; Moldenke, Phytologia 3: 461. 1951; E. J. Salisb., Ind. Kew. Suppl. 11: 40. 1953; Moldenke, Résumé 168 & 445. 1959; E. H. Walker, Bibl. East. Asiat. Bot. Suppl. 1: 235. 1960; Moldenke, Phytologia 21: 332. 1971.

A shrub, about 4 m. tall; branches medium-slender, very obtusely tetragonal, stellate-farinaceous with sordid-whitish pubescence that soon rubs off; principal internodes about 15 cm. long; leaves decussate-opposite; petioles slender, abbreviated, 2--5 mm. long, stellate-farinaceous; leaf-blades thin-membranous, somewhat lighter beneath, broadly elliptic or obovate, about 25 cm. long, 10--10.5 cm. wide when mature, long-acuminate at the apex, denticulate-margined from the widest part to about half way up to the terminal acumination, acuminate at the base, minutely puberulent above, more densely so beneath and stellate on the larger venation; midrib slender, plane above, prominent beneath; secondaries very slender, 8--10 or more per side, arcuate-ascending, not distinctly joined at the margins; tertiary and veinlet reticulation obscure above, the larger parts subprominulous beneath; inflorescence axillary, cymose, 4--5.5 cm. long, 4.5--6 cm. wide, many-flowered, brachiate, densely stellate throughout; peduncles slender, 8--20 mm. long; foliaceous bracts absent; bractlets and prophylla linear, 1--3 mm. long, stellate-farinaceous; pedicels filiform, 1 mm. long or less, stellate-farinaceous; calyx campanulate, about 1 mm. long and wide (or less), more or less stellate-farinaceous externally, the rim minutely 4-apiculate; corolla infundibular, about 4 mm. long in all, the lobes very short, glabrous outside except for some stellate hairs near the apex.

The type of this species was collected by Ying Tsiang (no. 10081) in dense shade of mixed woods, at 700 meters altitude, Tunghuashan, Ihwang, Kiangsi, China, on June 30, 1932, and is deposited in the Britton Herbarium at the New York Botanical Garden. Material has been misidentified and distributed in some herbaria under the name *C. cana* L.

In all, 2 herbarium specimens, including the type, and 4 mounted photographs have been examined by me.

Citations: CHINA: Hupeh: Tsao-Fei 7 (N). Kiangsi: Tsiang 10081 (F--photo of type, N--type, N--photo of type, Sg--photo of type, Z--photo of type).

CALLICARPA VANSTEENISI Moldenke, Phytologia 4: 286--287. 1953.

Bibliography: Moldenke, Phytologia 4: 193 & 286--287. 1953; Moldenke, Biol. Abstr. 27: 3121. 1953; G. Taylor, Ind. Kew. Suppl. 12: 27. 1959; Moldenke, Résumé 187 & 445. 1959.

A shrub; branches apparently virgate, very obtusely tetragonal, very finely and obscurely puberulous; nodes annulate; principal internodes 2.2--12.5 cm. long; leaves decussate-opposite; petioles slender, 1--2 cm. long, minutely puberulent; leaf-blades thin-chartaceous or submembranous, fragile, dark-green above, lighter beneath, elliptic, 7--13 cm. long, 2.5--5 cm. wide, acuminate at the apex, appressed-serrate along the margins from near the base to the apex, acute or acuminate at the base, very lightly and obscurely puberulous-strigillose on both surfaces, especially beneath; midrib slender, flat above, prominulous beneath; secondaries very slender or filiform, about 8 per side, ascending, only slightly arcuate, mostly obscure above, very slightly prominulous beneath; veinlet reticulation indiscernible above, rather conspicuous beneath; inflorescence cymose, axillary, mostly shorter than the subtending petioles, rather densely many-flowered; peduncles very short, filiform, puberulent; inflorescence-branches and pedicels filiform, puberulent, several mm. long; bractlets linear, about 1 mm. long or less, puberulent; calyx campanulate, puberulent, its tube about 1.5 mm. long, the spreading-triangular lobes about 1.5 mm. long, attenuate at the apex; corolla small, its tube equaling the calyx, its limb bilabiate, about 4 mm. wide, densely puberulent outside; stamens exerted 4--5 mm. from the corolla-mouth; fruiting-calyx hardly enlarged; fruits drupaceous, globose, about 3 mm. long and wide, red, glabrous.

The type of this species is Van Steenis 6373, collected at Boer in Poepandji, Atjeh, Sumatra, on May 3, 1934, and is deposited in the Herbarium Bogoriense at Buitenzorg, Java. A printer's error has produced "G." vansteenisi in the Biological Abstracts (1953) reference cited above: it is obviously an error for "C." [=Callicarpa].

In all, 2 herbarium specimens, including the type, and 2 mounted photographs of this species have been examined by me.

Citations: GREATER SUMDA ISLANDS: Sumatra: Van Steenis 6373 (Bg--72798--type, N--isotype, N--photo of type, Z--photo of type).

CALLICARPA VESTITA Wall. ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 567. 1885.

Synonymy: Callicarpa arborea β vestita Wall., Numer. List "49" [=50], hyponym. 1829. Callicarpa lanata Gamble ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 567, in syn. 1885 [not C. lanata Hosseus, 1912, nor H. J. Lam, 1940, nor Lam., 1821, nor L., 1767, nor Ridl., 1966, nor Roxb., 1839, nor Schau., 1870, nor Vahl, 1847, nor Wall., 1856, nor Walp., 1921, nor Willd., 1826, nor Zipp., 1841]. Callicarpa hookeri C. B. Clarke in Hook. f., Fl. Brit. India 4: 568, in nota nom. nud. 1885. Callicarpa sp. no. 3 Hook. f. & Thoms. ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 567, in

syn. 1885. Callicarpa sp. no. 4 Hook. f. & Thoms. ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 567, in syn. 1885. Callicarpa arborea Wall. apud Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 386, in syn. 1893 [not C. arborea L., 1966, nor "L. sensu Gamble", 1971, nor Merr., 1940, nor Miq., 1885, nor Roxb., 1814]. Callicarpa vestita "Wall. ex Clarke in Hook. f." ex Moldenke, Fifth Summ. 1: 419, in syn. 1971. Callicarpa vestita "Wall. ex C. B. Clarke", in herb.

Bibliography: Wall., Numer. List "49" [=50]. 1829; Gamble, List Trees Darj. Dist. 60. 1878; C. B. Clarke in Hook. f., Fl. Brit. India 4: 567 & 568. 1885; Watt, Dict. Econ. Prod. India 2: 27. 1889; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 386. 1893; Gamble, Man. Indian Timb., ed. 2, 525. 1902; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 471. 1906; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 21. 1921; J. M. Cowan, Rec. Bot. Surv. India 12: 68. 1929; Moldenke, Geogr. Distrib. Avicenn. 36. 1939; Moldenke, Prelim. Alph. List Invalid Names 9 & 11. 1940; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 471. 1941; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 54, 71, & 87. 1942; Moldenke, Alph. List Invalid Names 8 & 9. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 386. 1946; Moldenke, Alph. List Cit. 1: 79 (1946) and 4: 1018. 1949; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 125, 157, & 178. 1949; Moldenke, Phytologia 4: 121. 1952; Menninger, 1954 Price List [8]. 1954; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 3, 471. 1959; Moldenke, Résumé 160, 214, 241, 243, 244, & 445. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 386. 1960; Menninger, 1960 Price List Flow. Trees [2]. 1960; Yamazaki in Hara, Fl. East. Himal. 268. 1966; Moldenke, Phytologia 13: 501 & 502 (1966) and 14: 37. 1966; Deb, Sengupta, & Malick, Bull. Bot. Soc. Bengal 22: 177 & 199. 1968; Moldenke, Résumé Suppl. 17: 5. 1968; Moldenke, Phytologia 21: 225, 330, 336, 375, 387, & 449 (1971) and 22: 28. 1971.

Clarke's original (1885) description of this taxon is "C. vestita Wall. ms.; arboreous, leaves ovate acute subentire silky white-tomentose beneath, peduncles as long as the petioles stellately tomentose. C. lanata Gamble Darjeeling List 60, not of Linn. C. arborea Wall. Cat. 1826, partly. -- Callicarpa sp. no. 3 & 4, Herb. Ind. Or. Hf. & T. Nepal; Noakote, Wallich. Sikkim, alt. 1--4000 ft., in the outer valleys and Terai, frequent; Herb. Griffith, J. D. H. (Kew Distrib. n. 6042), &c. A tree, 30 ft.; resembling C. arborea. Leaves 4--10 in., base rounded or cuneate; tomentum beneath of stellate hairs having the secondary hairs fine, long and white. Inflorescence stellately white or tawny tomentose. Calyx at flower time nearly glabrous. -- Otherwise resembling C. arborea." He refers to C. hookeri only incidentally under what he calls C. lanata L., which he says is a species "Otherwise much resembling C. arborea and Hookeri."

Durand & Jackson (1906) reduce this name to synonymy under C. vestita although the reference cited by them seems to indicate that Clarke regarded it as applying to a different, although

closely related species not specified otherwise.

Jackson (1893) credits a "Callicarpa arborea Wall." to "Wall. Cat. n. 1826, partim" and reduces it to the synonymy of C. vestita. Actually, under his no. 1826 Wallich plainly identifies the material as "Callicarpa arborea Roxb.", proposing no new homonym, and cites seven specimens, the first six of which (from Nepal, Chittagong, Silhet, Hort. Bot. Calcutta, Moulmein, and an 1825 collection from a locality whose name I cannot decipher) he regarded as typical. The seventh collection, "Bechianco Napaliae 1820", he identifies as "♀ vestita" — obviously a variety of C. arborea Roxb. in his opinion. It is doubtless to this specimen that Jackson refers and it certainly should be regarded as the type collection of C. vestita.

It should also be noted that Gamble (1878) does not propose a new homonym, C. lanata Gamble, as is claimed by Clarke, Watt, and some other authors. He plainly credits the binomial to Linnaeus. However, it is claimed that the "Callicarpa lanata, Linn." of Gamble (1878) is really C. vestita. If this is so, then the information about the plant given by him refers to the latter, rather than to the former, species. He says that it is found at altitudes of 1000 to 6000 feet, "chiefly and almost entirely in old cultivations" in the Darjeeling district, and that it is distinguished from C. arborea Roxb. "by its leaves having soft white tomentum, while those of C. arborea have only a slight short stellate tomentum." He records the vernacular name "sung-a-kung" for it.

Deb and his associates (1968) describe C. vestita as a shrub or small tree growing in the outskirts of forests and in deciduous forests, and cite Deb 280 and Sengupta 1327 from Bhutan. Yamazaki (1966) gives its overall geographic distribution as "E. Himalaya (Nepal, Sikkim)".

The Herb. Econ. Coll. Bur. Pl. Ind. 47652, cited below, was grown from seed which originated from cultivated plants in the Lloyd Botanic Garden at Darjeeling, India.

The species is obviously very closely related to C. arborea Roxb. and its var. psilocalyx (H. J. Lam) Moldenke, but may be distinguished from them by its glabrous or glabrescent calyx during anthesis, the leaves averaging narrower, and the tomentum being a bit longer, whiter, and silkier on the lower leaf-surface.

Bakhuizen van den Brink (1921) reduces both C. lanata Gamble and C. vestita Wall. to the synonymy of C. tomentosa (L.) Murr. Menninger (1954) lists plants of this species for sale to the horticultural trade at \$5 per 3-foot plant.

Callicarpa vestita has been collected at altitudes of 200 to 2000 meters, fruiting in April.

It is perhaps worth noting here that the C. arborea accredited to Linnaeus and to Miquel is a synonym of C. tomentosa (L.) Murr., that credited to Merrill is C. arborea var. psilocalyx (H. J. Lam)

Moldenke, and that of Roxburgh is a valid species, and the C. lanata ascribed to Hosséus is a synonym of C. arborea Roxb., that credited to H. J. Lam is C. arborea var. psilocalyx (H. J. Lam) Moldenke, that of Lamarck is Premna tomentosa Willd., that credited to Linnaeus, to Roxburgh, to Wallich, and to Willdenow is C. tomentosa (L.) Murr., that credited to Ridley is C. maingayi King & Gamble, and that credited to Schauer, to Vahl, to Walpers, and to Zippelius is C. pedunculata R. Br.

Material of C. vestita has been misidentified and distributed in some herbaria under the names C. arborea Roxb., C. lanata L., C. tomentosa var. lanata (L.) Bakh., C. wallichiana Walp, and even Tetranthera sp. On the other hand, the Gillis 8574 [Fairchild Trop. Gard. FG. 59-759] and Pradham & Ihapa 4497, distributed as C. vestita, are actually C. macrophylla Vahl.

In all, 6 herbarium specimens and 2 mounted photographs of C. vestita have been examined by me.

Citations: INDIA: Sikkim: Kuntze 6649 (N); Kurz s.n. [Sikkim] (Bz--18679); Thomson s.n. [Sikkim] (Bz--18680, N--photo, Z--photo). West Bengal: C. B. Clarke 12628 D (Bz--18677, Bz--18678). CULTIVATED: Maryland: Herb. Econ. Coll. Bur. Pl. Ind. 47652 (Ar--19792).

CALLICARPA VILLOSA Vahl, Symb. Bot. 3: 14. 1794 [not C. villosa Baldw., 1936, nor Roxb., 1814].

Synonymy: Callicarpa foliis oblongo-ovatis integerrimis, subtus venoso-reticulatis villosis, racemis axillaribus, pedicellis multifloris Vahl ex Willd., Linn. Sp. Pl. 1: 621, in syn. 1797.

Bibliography: Vahl, Symb. Bot. 3: 14. 1794; Willd., Linn. Sp. Pl. 1: 621. 1797; Roem. & Schult. in L., Syst. Veg., ed. 15 nov., 3: 96--97. 1818; Steud., Nom. Bot., ed. 1, 137. 1821; Spreng. in L., Syst. Veg., ed. 16, 1: 421 (1825) and 5: 126. 1828; D. Dietr., Syn. Pl. 1: 429. 1839; Voigt, Hort. Suburb. Calc. 467. 1845; Schau. in A. DC., Prodr. 11: 646--647. 1847; Bocq., Adansonia, ser. 1, 3: 192. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 386. 1893; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 21. 1921; Moldenke in Fedde, Repert. Spec. Nov. 39: 305 (1936) and 40: 112. 1936; Fletcher, Kew Bull. Misc. Inf. 1938: 413. 1938; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 54 & 87. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 1: 386. 1946; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 125 & 445. 1949; Anon., Kew Bull. Gen. Index 1929-1956, p. 59. 1959; Moldenke, Résumé 160 & 445. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 1: 386. 1960; Moldenke, Résumé Suppl. 14: 6. 1966; Moldenke, Phytologia 13: 502 (1966) and 21: 453. 1971.

The original description (1794) of this plant by Vahl is "Callicarpa foliis oblongo-ovatis integerrimis, subtus venoso reticulatis villosis, racemis axillaribus, pedicellis multifloris. Habitat in India orientali? Dedit Dn. Dr. Dahl. Rami obscure tetragoni, villosi, incani. Folia petiolata, opposita, tri- vel quadripollicaria,

unicas duas vel ultra lata, supra glabra, subtus venoso-reticulata, villosa, acuminata. Pedunculi axillares, solitarii, oppositi, longitudine foliorum, superne pedunculis aliquot oppositis multifloris: flores brevissime pedicellati. Bractea linearis ad basin pedunculorum partialium. Calyx quadridentatus, parvus, uti corolla, uxtus villosus. Corollae tubus calyce parum longior. A reliquis dignoscitur pedunculis elongatis, nec brevibus dichotome ramosis. A Call. integrifolia Jacqu. hist. pag. 15. differre videtur tubo corollae multo brevior, quam habet figura Jacquini."

Jackson (1893) also gives "Ind. or.?" as the habitat for this puzzling species. Bakhuizen van den Brink (1921) reduces it to synonymy under C. tomentosa (L.) Murr., but apparently without having seen any authentic material. Willdenow (1797) calls it the "haarige Schönbeere".

The C. villosa accredited to Baldwin, mentioned above, is a synonym of C. americana L., while that of Roxburgh is a synonym of C. arborea Roxb.

Vahl's comparison of his plant with Callicarpa integrifolia Jacq. [now known as Aegiphila integrifolia (Jacq.) Jacks.] leads one to wonder if perhaps the plant originated in the New World instead of "Ind. or." and may not be an Aegiphila, too. The type will have to be examined in order to settle this matter. Nothing is known to me of the plant except what is stated in the cited bibliography. Voigt (1845) records it as cultivated in India.

CALLICARPA VILLOSISSIMA Ridl., Journ. Fed. Malay States Mus. 10: 110. 1920.

Bibliography: H. N. Ridl., Journ. Fed. Malay States Mus. 10: 110. 1920; A. W. Hill, Ind. Kew. Suppl. 6: 34. 1926; Fletcher, Kew Bull. Misc. Inf. 1938: 412. 1938; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 60 & 87 (1942) and ed. 2, 137, 138, & 178. 1949; Anon., Kew Bull. Gen. Index 1929-1956, p. 59. 1959; Moldenke, Résumé 177, 179, & 445. 1959; Moldenke, Phytologia 14: 220. 1967.

Ridley's original description (1920) of this species is "Tree; branches thickly yellow woolly tomentose with long plumed hairs. Young leaves densely tomentose; adult leaves elliptic-acuminate, acute, base cuneate, entire above except scurfy midrib and side nerves, glabrous beneath densely tomentose with stellate and plumed hairs; midrib densely covered with plumed hairs as are 13 pairs or nerves 10 in. long, 4.5 in. wide; petiole stout, 1.5 in. long tomentose. Panicles 3 in. long and as wide, widely spreading densely tomentose. Flowers sessile or sub-sessile. Calyx short almost cup-shaped, very obscurely toothed. Corolla glabrous tube twice as long; lobes oblong rounded. Stamens 4. Tazan: Tree; deep lilac; 6851. This might be considered a variety of C. arborea but the indumentum is totally different and the flowers have a shorter calyx. The panicles are wider than in most forms. The distinctly plumed hairs are very curious."

Fletcher (1938) reduces this species to synonymy under C. ar-

borea Roxb. Nothing is known to me about it except what is given in the literature cited above.

CALLICARPA VIRIDIS Domin, *Bibl. Bot.* 22 [89 (6)]: 1108 & 1109, fig. 179 (right). 1928.

Bibliography: Domin, *Bibl. Bot.* 22 [89 (6)]: 1108 & 1109, text fig. 179 (right). 1928; A. W. Hill, *Ind. Kew. Suppl.* 8: 37. 1933; Worsdell, *Ind. Lond. Suppl.* 1: 160. 1941; Moldenke, *Known Geogr. Distrib. Verbenac.*, ed. 1, 69 & 87 (1942) and ed. 2, 152 & 178. 1949; Moldenke, *Résumé* 208 & 445. 1959.

Illustrations: Domin, *Bibl. Bot.* 22 [89 (6)]: 1109, text fig. 179 (right). 1928.

The original description of this species by Domin (1928) is "Frutex elatus, ramis elongatis, tomento rufo-floccoso vestitis; folia opposita, breviter petiolata; petioli 1 cm vel paulo minus longi, dense floccoso-tomentosi; laminae permagnae, late ovato-ellipticae, sensim et breviter acuminatae, basi semper rotundatae, circa 17--19 cm longae et 8--9 cm latae, margine crenaturis humilibus, sed breviter apiculato-acuminatis dentatae, tenuiter membranaceae, utrinque virides, supra pilis minutis, simplicibus parce pilosulae, subtus pilis parvis, stellatis, distantibus, tantum secus costam et nervos primarios plus densis subpubescentes et glandulis parvis, aureis, crebris instructae; cymae breves, densiflorae, sub anthesis circa 1.5--2 cm longae, sub fructu usque longitudinem 3.6 cm attingentes, pedunculatae; pedunculi axillares, floccoso-tomentosi, petiolos circiter triplo superantes, insuper saepius foliorum par diminutorum gerentes; calyx circa 1.2 mm longus, dense stellato-hirsutus; corolla calycem duplo superans; antherae lineari-oblongae, saltem 1 mm longae, ad connectivum glandulis dense conspersae; drupa globosa, viva 3 mm lata..... Nordost-Queensland: Regenwälder bei Harveys Creek (Domin I.1910). Species certe distincta, cum C. pedunculata foliis basi rotundatis congrua, sed foliis multo majoribus, utrinque viridibus, cymis longius pedunculatis, drupis minoribus facile dignoscenda. A C. longifolia, cum qua foliis concoloribus, viridibus convenit, distat jam laminis basi rotundatis (nec in petiolum angustatis), cymis densifloris et corollis glabris; C. cana, quae cymis densis speciem nostram revocat, foliis rigidioribus, minoribus, basi acutis, subtus albo- vel cano-tomentosis facillime separatur."

I know nothing of this species beyond what is stated in the literature.

CALLICARPA WEBERI Merr., *Philip. Journ. Sci. Bot.* 12: 298--299. 1917.

Bibliography: E. D. Merr., *Philip. Journ. Sci. Bot.* 12: 298--299 & 382. 1917; E. D. Merr., *Enum. Philip. Flow. Pl.* 3: 388. 1923; A. W. Hill, *Ind. Kew. Suppl.* 6: 34. 1926; Moldenke, *Known Geogr. Distrib. Verbenac.*, ed. 1, 62 & 87. 1942; H. N. & A. L. Moldenke, *Pl. Life* 2: 88. 1948; Moldenke, *Known Geogr. Distrib. Verbenac.*, ed. 2, 141 & 178. 1949; Moldenke, *Résumé* 183 & 445. 1959; Moldenke, *Phytologia* 21: 445 & 448. 1971.

Merrill (1917) describes this species as "a tree 8 m high, the younger parts densely and uniformly ferruginous-pubescent with short stellate hairs, the indumentum on the older parts and on the lower surfaces of the leaves paler but equally dense. Branches terete, the younger branchlets obscurely angled. Leaves subcoriaceous, ovate to elliptic-ovate, 8 to 14 cm long, 5 to 8 cm wide, entire, base rounded to acute, apex obtuse to shortly and acutely acuminate, the upper surface smooth, shining, dark brown or olivaceous-brown, eglandular, glabrous except the midrib and lateral nerves, these sometimes minutely-stellate-pubescent, the lower surface very densely and uniformly stellate-pubescent with short, pale to ferruginous hairs, the glands not evident, the older leaves distinctly pitted or foveolate beneath; lateral nerves 7 on each side of the midrib, prominent, curved, the reticulations distinct; petioles 1.5 to 5 cm long. Cymes in the upper axils, about 8 cm long and up to 6 cm wide, long-peduncled, all parts densely pale- pr ferruginous-pubescent, dichotomously branched, the purplish flowers densely crowded; peduncles about 5 cm long; bracts linear, 5 to 6 mm long, the bracteoles similar but much smaller; pedicels about 2 mm long. Calyx cup-shaped, densely stellate-pubescent, 2 to 2.3 mm long, truncate, the teeth 4, minute, obscure. Corolla-tube puberulent externally, 4 mm long, the lobes oblong, obtuse, 1.5 mm long; stamens 4, the anthers oblong, 3 mm in length, exerted."

The type of the species was collected by Charles Martin Weber between Palawan and Balabac, bancalan, Philippine Islands, on September 26, 1916, and was deposited in the herbarium of the Philippine Bureau of Science at Manila, now lamentably destroyed. Merrill (1917) comments that "This species is an ally of Calli-carpa arborea Roxb. and C. maingayi King & Gamble, differing from both, however, in many characters; and of the Philippine Calli-carpa magna Schauer, differing from the latter in its smaller leaves, densely stellate-pubescent calyx, and puberulent corolla. It is apparently most closely allied to Callicarpa arborea Roxb., but its cymes are much smaller and usually but once or twice forked; its leaves smaller and fewer nerved; its flowers larger; and its ovaries are slightly glandular but not tomentose."

Nothing is known to me of this species beyond what is stated in the literature cited above.

CALLICARPA WOODII Merr., Philip. Journ. Sci. 30: 86. 1926.

Bibliography: E. D. Merr., Philip. Journ. Sci. 30: 86. 1926; A. W. Hill, Ind. Kew. Suppl. 8: 37. 1933; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 64 & 87. 1942; H. N. & A. L. Moldenke, Pl. Life 2: 89. 1948; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 145 & 178. 1949; Moldenke, Résumé 192 & 445. 1959; Moldenke, Résumé Suppl. 8: 3. 1964; Moldenke, Phytologia 14: 248 (1967) and 21: 330. 1971.

Merrill's original (1926) description of this taxon is as follows: "Frutex circiter 2 m altus, inflorescentiis exceptis subglaber, ramis subteretibus, glabris, ramulis rotundato-4-angulatis,

4-sulcatis, circiter 4 mm diametro, leviter cinereo-puberulis; foliis oppositis, subcoriaceis, in siccitate pallidis, oblongo-obovatis, 17 ad 30 cm longis, 7 ad 12 cm latis, distincte acuminatis, deorsum angustatis, basi acutis vel cuneatis, utrinque glabris et glandulosis vel subtus ad costa nervisque obscure puberulis, margine integris vel distanter obscure denticulatis; nervis primariis utrinque 7 ad 9, curvatis, perspicuis, secundariis subparallelis; petiolo crasso, 5 ad 8 mm. longo; cymis axillaribus, fasciculatis, sessilibus vel breviter pedunculatis, paucifloris, circiter 1.5 cm longis, dense sordide stellato-tomentosis; floribus 4-meris, pedicellis 2 ad 4 mm longis, calycis cupulatis, truncatis vel obscure et minute 4-denticulatis, longitudinaliter 4-nervis, extus leviter stellato-pubescentibus, circiter 2.5 mm longis; corolla immatura 4.5 mm longa, 4-lobata, glandulosa; antheris 2.5 mm longis; fructibus obovoideis, 3.5 mm longis, glandulosis."

The species is based on an unnumbered specimen collected by P. Orolfo [D. D. Wood 1194] in secondary forests, at an altitude of about 50 meters, at Kampong Limbo, Sabah, on August 4, 1924, and was deposited in the herbarium of the Philippine Bureau of Science at Manila, now unfortunately destroyed.

Merrill comments that this is "A species well characterized by its glabrous, rather large, entire or very obscurely denticulate leaves, and by its short, fascicled, stellate-tomentose, few-flowered inflorescences which do not exceed 1.5 cm in length. It probably belongs in the general group with Callicarpa basilanensis Merr." It should also be compared critically with C. involucrata Merr.

The Pickles collection cited below is placed here tentatively, identified merely by comparison with the published description of C. woodii by Merrill (1926), since no authentic material of this species has thus far been available to me for comparison. The collector describes his plant as a sapling, 29 feet tall, the trunk 3 inches in diameter, bark smooth, gray-brown, the outer bark soft, the inner creamy-green, fibrous, and soft, the sapwood orange, the pith soft, the leaves "1/2 to 10 inches", the flowers white, borne "on the twigs, branches, and stem", the fruit "green and red", flowering and fruiting in December. He reports the vernacular name "uchong achai" for it. Only this one herbarium specimen has been examined by me.

Citations: GREATER SUNDA ISLANDS: Sarawak: Pickles s.n. [Herb. Sarawak Forest Dept. 3663] (W-2377057).

CALLICARPA WRIGHTII Britton & P. Wils. in N. L. Britton, Mem.

Torrey Bot. Club 16: 97. 1920.

Bibliography: N. L. Britton, Mem. Torrey Bot. Club 16: 97. 1920; A. W. Hill, Ind. Kew. Suppl. 6: 34. 1926; Moldenke in Fedde, Repert. Spec. Nov. 39: 298 (1936) and 40: 56, 73-75, 78-80, 119, 122, 125, & 129. 1936; Moldenke, Geogr. Distrib. Avicenn. 5. 1939; Moldenke, Known Geogr. Distrib. Verbenac., ed. 1, 24 & 87. 1942; Moldenke, Alph. List Cit. 1: 3 & 109. 1946; H. N. & A. L. Molden-

ke, Pl. Life 2: 90. 1948; Moldenke, Alph. List Cit. 2: 487 (1948), 3: 867 & 929 (1949), and 4: 1043. 1949; Moldenke, Known Geogr. Distrib. Verbenac., ed. 2, 43 & 178. 1949; Alain in León & Alain, Fl. Cuba 4: 304 & 306—307. 1957; Moldenke, Résumé 50 & 445. 1959; Moldenke, Phytologia 14: 187. 1966; J. A. Clark, Card. Ind. Gen. Sp. Var. n.d.

The species has been collected in anthesis in July and December. The León, Clément, & Nestor 5380, cited below, is a mixture with C. ferruginea Sw.

In all, 9 herbarium specimens, including the type, and 5 mounted photographs of C. wrightii have been examined by me.

Additional & emended citations: CUBA: Oriente: Acuña 9869 (Es, Es); Clément 441 (Ha); León, Clément, & Nestor 5380, in part (Ha), 5599 (Ha); Shafer 4235 (Mi--photo, W--1047819).

ADDITIONAL NOTES ON THE GENUS ACANTHOLIPPIA. II

Harold N. Moldenke

ACANTHOLIPPIA Griseb.

Additional bibliography: Solered., Syst. Anat. Dicot. 712. 1899; Briq. in Chod. & Wilczek, Bull. Herb. Boiss., sér. 2, 2: 544. 1902; D. H. Scott in Solered., Syst. Anat. Dicot. [trans. Boodle & Fritsch] 1: 630. 1908; Reiche, Fl. Chile 5: 299—301. 1910; Peyrera, Bol. Univ. Tucumán 8: 3—13. 1926; Ducloux & Albizzati, Revist. Fac. Cienc. Quim. Univ. Nac. La Plata 4: 47—56. 1927; Peyrera, Chem. Abstr. 22: 138. 1928; Ducloux & Albizzati, Chem. Zentr. 2: 1970. 1928; Schimmel & Co., Ann. Rep. 65. 1928; Schimmel & Co., Chem. Abstr. 22: 3951. 1928; Fester & Martinuzzi, Anal. Asoc. Quim. Arg. 40: 36—60. 1952; Fester & Martinuzzi, Chem. Abstr. 46: 11586—11587. 1952; Fester & al., Revist. Fac. Ind. & Agr. Univ. Nac. Litoral Santa Fé Arg. 21/22: 43—84. 1952; Fester & al., Chem. Abstr. 48: 6655—6656. 1954; Cabrera, Revist. Invest. Agric. 11: 327, 336, & 397. 1957; Fester, Martinuzzi, Retamar, & Ricciardi, Bol. Acad. Nac. Cienc. 40: 189. 1958; Ruiz Leal & Roig, Bol. Estud. Geogr. Mendoza 25: 170—171. 1959; Fester, Martinuzzi, Retamar, & Ricciardi, Chem. Abstr. 54: 12496. 1960; Burkart, Excerpt. Bot. A.2: 604. 1960; Fester, Martinuzzi, Retamar, Ricciardi, Romero Fonseca, & Cassano, Revist. Fac. Cienc. Agrar. Mendoza 8 (2): [45], 46, & 49. 1961; Ruiz Leal, Bot. Estud. Geograf. Mendoza 8 (32): 105, fig. A. 1961; Kariyone, Ann. Ind. Rep. Pl. Chem. 1959: 94. 1962; Hocking, Excerpt. Bot. A.4: 224. 1962; Böcher, Hjerting, & Rahn, Dansk Bot. Arkiv 22: 105. 1963; Anon., Hort. Abstr. 35: 444. 1965; Troncoso in Cabrera, Fl. Prov. Buenos Aires 5: 123. 1965; Moldenke, Phytologia 15: 463—470. 1968; Böcher, Hjerting, & Rahn, Dansk Bot. Arkiv 22: 171. 1968; Moldenke, Biol. Abstr. 49: 3252. 1968; Anon., Biol. Abstr. 49 (7): B. A. S. I. C. S.3. 1968;